

CLAIMS

- 1 1. A cover assembly for a microplate, said assembly comprising:
2 a layer of material shaped and dimensioned to removably seal a plurality of a mi-
3 croplate's well openings;
4 a pressure plate disposed on said layer of material for dispersing a compressive
5 force in a generally uniform manner across said layer; and
6 a cover having a top and first and second sides, said top shaped so as to generate
7 said compressive force when said cover is engaged with said microplate, said first
8 and second sides each including a flange for supporting a bottom edge of said mi-
9 croplate.
- 1 2. The cover assembly as in claim 1 wherein said top and pressure plate each include
2 one or more laterally-extending tabs which enable said cover to be engaged with or dis-
3 engaged from said microplate by a robotic system.
- 1 3. The cover assembly as in claim 1 wherein said cover's first and second sides in-
2 clude apertures which render at least portions of the side surfaces of said microplate visi-
3 ble when said cover is engaged with said microplate.
- 1 4. The cover assembly as in claim 1 wherein said top includes a ridge extending
2 along its length and central axis, whereby when said cover is engaged with said micro-
3 plate, said ridge bears upon said pressure plate.
- 1 5. The cover assembly as in claim 1 wherein said cover's first and second sides in-
2 clude downwardly-extending tabs which enable one cover assembly to be stacked upon
3 another cover assembly.
- 1 6. The cover assembly of claim 1 wherein said pressure plate comprises a generally
2 rectangular piece of metal with robotic access features.

- 1 7. A method of removably sealing a microplate, said method comprising the steps
2 of:
3 providing a layer of material shaped and dimensioned to removably seal a plural-
4 ity of a microplate's well openings;
5 providing a pressure plate disposed on said layer of material for dispersing a
6 compressive force in a generally uniform manner across said layer; and
7 providing a cover disposed on said pressure plate, said cover shaped so as to exert
8 said compressive force on said pressure plate when said cover is removably en-
9 gaged with said microplate.
- 1 8. The method as in claim 7 wherein said cover includes one or more laterally-
2 extending tabs which enable said cover to be engaged with or disengaged from said mi-
3 croplate by a robotic system.
- 1 9. The method as in claim 7 wherein said cover includes a ridge extending along its
2 length and central axis, whereby when said cover is engaged with said microplate, said
3 ridge bears upon said pressure plate.
- 1 10. The method as in claim 7 wherein said cover includes downwardly-extending tabs
2 which enable one microplate/cover unit to be stacked upon another microplate/cover unit.